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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/848,259	05/04/2001	Daniel R. Jeske	2925-0575P	6336
30594	7590	08/10/2005		EXAMINER
HARNESS, DICKEY & PIERCE, P.L.C. P.O. BOX 8910 RESTON, VA 20195				WARE, CICELY Q
			ART UNIT	PAPER NUMBER
			2634	

DATE MAILED: 08/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/848,259	JESKE ET AL.
Examiner	Art Unit	
	Cicely Ware	2634

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 13 October 2004.

2a) This action is **FINAL**. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-5 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1,3 and 5 is/are rejected.

7) Claim(s) 2, 4 is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on 13 October 2004 is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) All b) Some * c) None of:
1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) Notice of References Cited (PTO-892)
2) Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
5) Notice of Informal Patent Application (PTO-152)
6) Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments, see **REMARKS**, filed 10/13/2004 with respect to the rejection(s) of claim(s) 1,2 3 under 35 USC 102(b) and 4 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Fukuhara (US Patent 4,627,103).

Claim Objections

2. Claims 1, 3, 4 and 5 are objected to because of the following informalities: a.

a. Claims 1, 3, 4 and 5, applicant uses the acronym "SINR" in reference to "signal-to-noise ratio". Examiner asserts that the acronym for signal-to-noise ratio is SNR and the acronym for signal-to-interference-noise ratio is SINR. Examiner suggests applicant use the correct acronym for the specified ratio for clarification purposes. Appropriate correction is required.

Claim Rejections - 35 USC § 112

3. Claim 5 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter, which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Claim 5 recites "converting the received data symbol samples into quasi-pilot symbol samples based on the estimated polarities". Examiner is unable to find support for this limitation in the claim. Therefore claim 5 has not been further treated on the merits.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1, 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Fukuhara (US Patent 4,627,103).

(1) With regard to claim 1, Fukuhara discloses in (Fig. 3 and Figs. 4, 9, 10) a method of estimating a signal-to-noise ratio (SINR), comprising: estimating polarities of a plurality of received data symbol samples (3); and generating an SINR estimate (Fig. 4, (10)) based on the plurality of received data symbol samples and the estimated polarities of the plurality of received data symbol samples such that the SINR estimate is not substantially dependent on a polarities of the plurality of received data symbol samples (col. 1, lines 43-55, col. 10, lines 9-20).

(3) With regard to claim 3, claim 3 inherits all the limitations of claim 1. Fukuhara further discloses in (Figs. 4, 9, 10) estimating bit values (4) of a plurality of received data symbol samples (8, 3) (col. 3, lines 23-29, col. 10, lines 21-31).

Allowable Subject Matter

6. Claims 2, 4 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. The following is a statement of reasons for the indication of allowable subject matter: The instant application discloses a method of estimating a signal-to-noise ratio. Prior art references show similar methods but fail to teach: **“wherein the generating step multiplies each of the plurality of received data symbol sample by an associated estimated polarity and generates the SINR estimate using the multiplication results as data symbol samples in an SINR estimation algorithm”**, as in claims 2 and 4.

Conclusion

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cicely Ware whose telephone number is 571-272-3047. The examiner can normally be reached on Monday – Friday, 8-5.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephen Chin can be reached on 571-272-3056. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-3900.

Cicely Ware

cqw
August 1, 2005



STEPHEN CHIN
SUPERVISORY PATENT EXAMINEE
TECHNOLOGY CENTER 2800